

**REMARKS**

This Amendment and Response to non-final Office Action is being submitted in response to the non-final Office Action mailed July 27, 2005. Claims 1-21 are pending in the Application. Claims 1-21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Bai (U.S. Pat. No. 6,735,395) in view of Condict et al. (U.S. Pat. No. 5,978,155)

In response to these rejections, Claims 1 and 12 have been amended to further clarify the subject matter which Applicant regards as the invention, without prejudice or disclaimer to continued examination on the merits. These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added. Based upon the amendments, reconsideration of the Application is respectfully requested in view of the following remarks.

**Rejection of Claim 28 Under 35 U.S.C. 103(a) – Bai in view of Condict et al.:**

Although the Examiner does not explicitly state that Condict et al. is relied on in rejecting the application, each of the rejections cited mentions the inadequacies of Bai, and relies on Condict et al. to supplement Bai's teachings. Claims 1-21 therefore must stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bai (U.S. Pat. No. 6,735,395) in view of Condict et al. (U.S. Pat. No. 5,978,155). The Examiner equates the determination of channel weighting values of claim 1 with comparison of measured power values to a pre-set value as described by Bai.<sup>1</sup> This is inaccurate.

Bai states that the power from individual channels of the WDM is measured by a microprocessor and then compared to a pre-set value. The microprocessor then changes the optical attenuators so that the measured power directly corresponds to the pre-set value. Alternatively, the microprocessor can change the setting of the driving current so as to set the correct power, again, corresponding to the pre-set value. This process is then repeated for every channel, so that every channel is stabilized to the same preset value.<sup>2</sup>

This is exactly what the Applicant has admitted in the prior art. In numbered paragraph 7 of the Application, the Applicant describes the flat power spectrum disclosed in Bai. There, the Applicant states, "all of the channels of a WDM system are launched (transmitted or otherwise injected into an optical communications path) with the same power level."<sup>3</sup>

The Applicant has found that there are benefits to having different launch powers for different channels. Channel power values used for amplifier power control may be weighted (e.g. the power value of a channel may be an integer multiple of a defined channel) to account for mixed channel plans. Channel powers may be weighted according to, *et alia*, the data rate and/or the format of the signal. For example, a signal

---

<sup>1</sup> US Pat No 6735395, col. 5, lines 65 through col. 6, line 6.

<sup>2</sup> Id.

<sup>3</sup> U.S. Pat. App. Pub. No. 2003/0035170, paragraph 7.

having a transmission rate of 2.5 Gbps may be used as a reference value with a weight of 1 channel unit; a signal having a 10 Gbps transmission rate using forward error correction may be weighted as 2 channel units, and a signal having a 10 Gbps transmission rate without forward error correction may be weighted as 4 channel units.<sup>4</sup>

Applicant has amended independent claims 1 and 12 to clarify the relationship between launch powers of differing channels. Currently amended claim 1 now recites:

1. (Currently Amended) A method for coordinating channel power information in a wavelength division multiplexed optical communications system having at least a first and a second network element, the method comprising:

gathering information on local communications assets local to the first network element including launch path power values and channel information of the plurality of wavelength division multiplexed channels output from the first network element;

determining channel weighting values for the plurality of wavelength division multiplexed channels output from the first network element based on the launch path power values and the channel information, wherein at least one of said plurality of channel weighting values is different from the remainder of said plurality of channel weighting values; and

transmitting the channel weighting values from the first network element to the second network element.

As stated in the Application as filed, once provisioning occurs, the launch power of the channels is adjusted. This is accomplished by the controller accessing the launch power settings in the database and controlling one or more of the variable optical attenuators according to those settings. Channel weighting values are then determined for each channel. Channel weighting values may be based on such factors as channel type, including data rate and format, equipment configuration, transmitter launch power, VOA settings, and other gain or loss elements in the signal launch path. In other words, the channel weighting determination may account for variable as well as fixed or provisioned attenuation values present on the signal launch path. In general, where the launch path power values include such fixed or provisioned attenuation values and launch

---

<sup>4</sup> Id. at paragraphs 8-10.

power settings, the channel weighting value is a function of the launch path power value for that channel, channel type, data rate, and equipment configuration.<sup>5</sup>

Therefore, Applicant submits that the rejection of Claims 1-21 under 35 U.S.C. 103(a) as being unpatentable over Bai (U.S. Pat. No. 6,735,395) in view of Condict et al. (U.S. Pat. No. 5,978,155) has now been traversed and respectfully requests that this rejection be withdrawn.

---

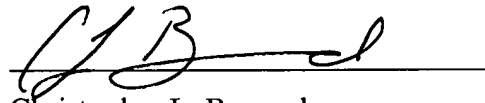
<sup>5</sup> Id. at paragraphs 54-57.

**CONCLUSION**

Applicant would like to thank Examiner for the attention and consideration accorded the present Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

Date: October 27, 2005

A handwritten signature in dark ink, appearing to read 'C L Bernard', is written over a horizontal line.

Christopher L. Bernard  
Registration No.: 48,234  
Attorney for Applicant

**DOUGHERTY, CLEMENTS, HOFER, BERNARD & WALKER**

1901 Roxborough Road, Suite 300  
Charlotte, North Carolina 28211 USA  
Telephone: 704.366.6642  
Facsimile: 704.366.9744  
cbernard@worldpatents.com